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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,065	06/20/2001	Yoshiaki Hirano	35.C15463	1688

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EXAMINER	
MILIA, MARK R	
ART UNIT	PAPER NUMBER
2622	

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/884,065	HIRANO, YOSHIAKI	
	Examiner	Art Unit	
	Mark R. Milia	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-15 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-15 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 20 June 2001 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Figure 2, elements (302), (304), (342), and (367), Figure 9, elements (506), (507), (508), and (509), and Figure 24, element (1505). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 5-6, 8, 9-10, 12, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6809834 to Sato.

Regarding claims 1 and 9, Sato discloses a printer and method for controlling a printer in which a PDL controller (see column 2 lines 56-64, reference discloses a coding/decoding controller for image data which is analogous to a PDL controller) and a printer engine made up in a predetermined recording scheme are connected With each other by using a parallel interface for DMA-transferring image data to be printed via said interface, comprising: control means for writing draw data developed in said PDL controller once into a buffer memory (see column 2 lines 47-55 and column 3 lines 54-61), reading the 90° rotated data from said buffer memory (see column 2 lines 40-46 and column 3 lines 31-40), and making a DMA transfer to a memory of said printer engine (see column 2 lines 47-55 and column 3 lines 54-61).

Regarding claims 10 and 12, Sato discloses a print control apparatus and method, comprising: generator means for generating bit map data on the basis of print data (see column 2 lines 17-21 and 47-64), storage means for storing the bit map data generated by said generator means (see column 2 lines 30-35), and rotator means for rotating said image data in transferring the image data stored in said storage means to a printer engine (see column 2 lines 40-46, column 3 lines 31-40, and column 5 lines 4-20).

Regarding claim 14, Sato discloses a printer, comprising: generator means for generating bit map data on the basis of print data (see column 2 lines 17-21 and 47-64), storage means for storing the bit map data generated by said generator means (see column 2 lines 30-35), a printer engine for making a print on the basis (see column 4 lines 25-35), and of said bit map data; rotator means for rotating said bit map data in transferring the bit map data stored in said storage means to said printer engine (see column 2 lines 40-46, column 3 lines 31-40, and column 5 lines 4-20).

Regarding claim 2, Sato discloses the system discussed in claim 1, and further discloses wherein draw data are divided into predetermined rectangular areas having the size of said buffer memory and for each of said rectangular areas, a top address of said rectangular area of a memory in the PDL controller, an effective print area width, the width of said rectangular area, the number of lines in said rectangular area or a transfer size as well as a top address of said rectangular area of a memory in said printer engine, an effective print area width, the width of said rectangular area, the number of lines in said rectangular area or a transfer size are set up to make a DMA transfer (see Figs. 7a and 7b and column 5 lines 4-20).

Regarding claim 5, Sato discloses the system discussed in claim 1, and further discloses wherein the draw data developed in said PDL controller are once written into an N x M bit and single buffer memory, the 90° rotated data are read from said buffer memory and the next draw data are written into said buffer memory while the data to be transferred from said buffer memory to said printer engine memory are read in the DMA transfer to said printer engine memory (see column 3 line 22-column 4 line 44).

Regarding claim 6, Sato discloses the system discussed in claim 1, and further discloses wherein the draw data developed in said PDL controller are once written into a buffer memory and read out from said buffer memory and it is controlled corresponding to predetermined processing conditions whether 90° rotation of said data is executed or not in the DMA transfer to said printer engine memory (see column 3 line 22-column 4 line 44 and column 5 lines 4-20).

Regarding claim 8, Sato discloses the system discussed in claim 1, and further discloses wherein the draw data developed in said PDL controller are transferred to said buffer memory via a dedicated bus different from a common bus for transferring other data than draw data between said PDL controller and the printer engine (see column 2 lines 47-55, column 3 lines 22-61, and column 4 lines 25-38, reference shows that DMA controller controls the transfer of print data between the controller and the print/plot engine which is dedicated for print data therefore the claim is anticipated by the reference).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato as applied to claim 1 above, and further in view of U.S. Patent No. 6330374 to Yamaguchi et al.

Sato discloses (*claim 4*) wherein a plurality of said buffer memories of N x M bit size are provided to write draw data from a memory within the PDL controller into one buffer memory and at the same time, read data from another buffer memory and write the data into a memory of the printer engine (see column 3 lines 54-61, column 4 lines 27-44, and column 5 lines 4-20).

Sato does not disclose expressly (*claim 3*) wherein said buffer memory has an N x M bit size, N corresponds to a positive integer times the size of the data bus at the PDL controller side and M corresponds to a positive integer times the size of the data bus at the printer engine.

Yamaguchi discloses (*claim 3*) wherein said buffer memory has an N x M bit size, N corresponds to a positive integer times the size of the data bus at the PDL controller side and M corresponds to a positive integer times the size of the data bus at the printer engine (see column 4 line 48-column 5 line 17).

Sato & Yamaguchi are combinable because they are from the same field of endeavor, image manipulation and rotation.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the DMA transfer size of print data being the same as the buffer size of Yamaguchi with the system of Sato.

The suggestion/motivation for doing so would have been to provide an increase in the speed of the system (see column 10 lines 9-20 of Yamaguchi).

Therefore, it would have been obvious to combine Yamaguchi with Sato to obtain the invention as specified in claims 3 and 4.

Claims 7, 11, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato as applied to claims 1, 10, 12, and 14 above, and further in view of U.S. Patent No. 5625466 to Nakajima.

Regarding claim 7, Sato does not disclose expressly wherein said predetermined processing conditions comprise the presence of respective like-sized sheets having different print directions and it is controlled corresponding to said predetermined processing conditions whether 90° rotation of said data is executed or not.

Nakajima discloses wherein said predetermined processing conditions comprise the presence of respective like-sized sheets having different print directions and it is controlled corresponding to said predetermined processing conditions whether 90 rotation of said data is executed or not (see column 6 line10-column 8 line 26, with particular attention to column 6 lines 10-30, 38-41, and 61-66 and column 7 lines 30-35, reference discloses a system to automatically check the direction and orientation of a document placed in the document feeder and checks the type and orientation of the paper to which the printing is to executed and rotated the print data according to the above conditions).

Regarding claims 11, 13, and 15, Sato does not discloses expressly wherein said rotation is caused if the direction of a sheet in the generation of bit map data by said generator means differs from that of an actually printed sheet.

Nakajima discloses wherein said rotation is caused if the direction of a sheet in the generation of bit map data by said generator means differs from that of an actually printed sheet (see column 6 line10-column 8 line 26, with particular attention to column 6 lines 10-30, 38-41, and 61-66 and column 7 lines 30-35).

Sato & Nakajima are combinable because they are from the same field of endeavor, rotation of image data to be printed.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the detection of page orientation of Nakajima with the system of Sato.

The suggestion/motivation for doing so would have been to provide more accurate use of rotation controls and thus decrease the production time of printed material.

Therefore, it would have been obvious to combine Nakajima with Sato to obtain the invention as specified in claims 7, 11, 13, and 15.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. To further show state of the art refer to U.S. Patent numbers 5634088 (Banton), 5577182 (Hayashi), 4967274 (Sonoda), 5479525 (Nakamura et al.),

6104843 (Nakashima), 6389170 (Kawasaki et al.), 6473123 (Anderson), and 5627650 (Nosakiet al.).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark R. Milia whose telephone number is (703) 305-1900. The examiner can normally be reached M-F 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached at (703) 305-4712. The fax number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mark R. Milia
Examiner
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